

## CLAIMS

1. A process for producing  $\alpha$ -methyl styrene, which comprises dehydrating cumyl alcohol in the presence of an activated alumina, wherein a concentration of an organic acid contained in a raw material containing cumyl alcohol is 10 to 1,000 ppm by weight.

2. The process according to claim 1, wherein the organic acid in the raw material is at least one selected from the group consisting of formic acid, acetic acid and propionic acid.

3. The process according to claim 1, wherein the process is a part of a process for producing propylene oxide comprising the following steps:

oxidation step: a step of obtaining cumene hydroperoxide by oxidizing cumene;

epoxidation step: a step of obtaining propylene oxide and cumyl alcohol by reacting cumene hydroperoxide contained in a cumene solution with propylene in an excess amount in the presence of a epoxidation catalyst in a liquid phase;

dehydration step: a step of obtaining  $\alpha$ -methyl styrene by dehydrating cumyl alcohol obtained in the epoxidation step in the presence of a dehydration catalyst; and

hydrogenation step: a step of hydrogenating  $\alpha$ -methyl styrene in the presence of a hydrogenation catalyst to convert into cumene and recycling it to the oxidation step as a raw material.